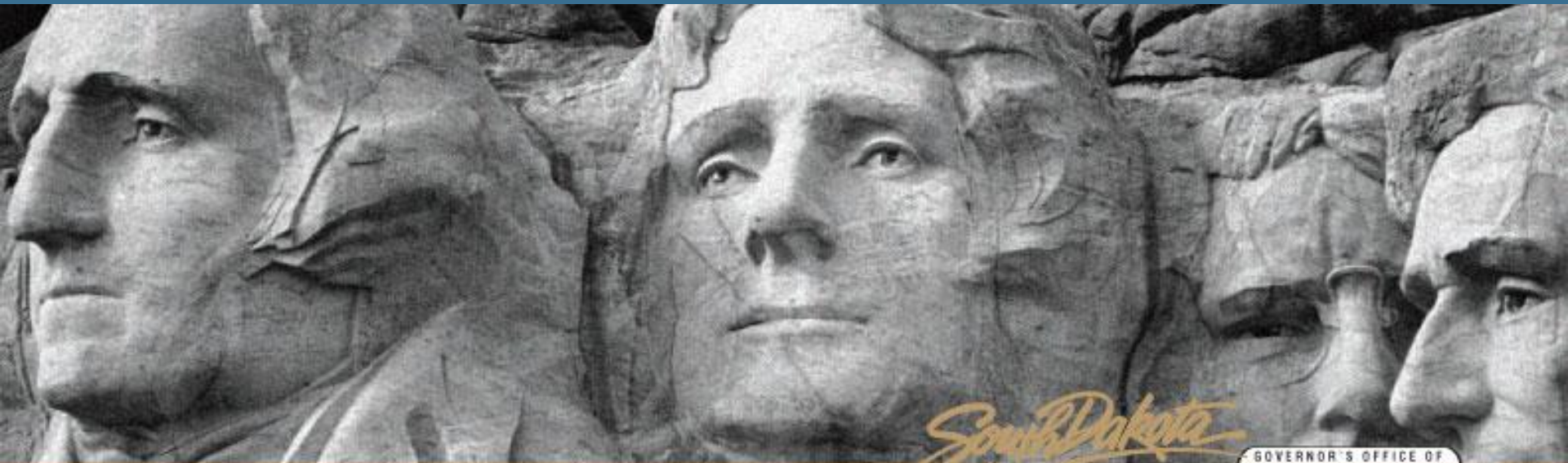


South Dakota Energy Infrastructure Authority (SDEIA)

SD Wind Energy Task Force

Pierre, SD

September 7, 2011



South Dakota

GOVERNOR'S OFFICE OF

ECONOMIC DEVELOPMENT

www.SDGREATPROFITS.com



Briefing Overview

- SDEIA Wind Power Report
- South Dakota Wind Energy Supply Chain

South Dakota Energy Infrastructure Authority

- Created by the South Dakota Legislature in the 2005 session
- Legislative Intent – Diversify and expand the State's economy by developing in South Dakota the energy production facilities and the energy transmission facilities necessary to produce and transport energy to markets within the state and outside the state

SDEIA

- The Authority is governed by a five member board of directors. Board members are appointed by the Governor and serve staggered six year terms. Members may be reappointed.

SDEIA

- Current board members are:
 - Mike Trykoski, Rushmore Professional Services, Rapid City (Chairman)
 - Kyle White, Black Hills Corporation, Rapid City (Vice Chairman)
 - Raymond Wahl, Missouri River Energy Services, Sioux Falls
 - Mike Held, South Dakota Farm Bureau, Huron
 - Dr. Mike Ropp, Brookings
- Executive Director – Hunter Roberts,
Energy Policy Director, GOED

South Dakota Wind Power Report

- Reports prepared:
 - Electric Industry Interviews Report – December, 2006
 - Energy Study Report – February, 2007
 - South Dakota Wind Power Report, December, 2007
 - SD Landowner's Wind Power Development Handbook, 2008
- Reports can be found on the SDEIA web site – www.sdeia.com

South Dakota Wind Power Report

- The result of interviews conducted during the summer of 2007 with 24 entities:
 - that produce or distribute electricity in SD;
 - that plan to develop such facilities; or
 - are government agencies; and,
 - an extensive review of publicly available information.

South Dakota Wind Power Report

- Unlike the two previous energy reports submitted by the SDEIA, which were prepared by a consultant, the Wind Power Report is entirely the result of efforts by the SDEIA and its Interim Executive Director.
- All interviews were conducted by Board members in order to obtain first hand information and to assist in establishing a dialogue with the entities.

South Dakota Wind Power Report

- The report is intended to serve as a resource document for government officials and the public, providing information and identification of issues, and is intended to promote efficient decision making.
- The report does not make any specific recommendations.

South Dakota Wind Power Report

- **There is no Silver Bullet**

South Dakota Wind Power Report

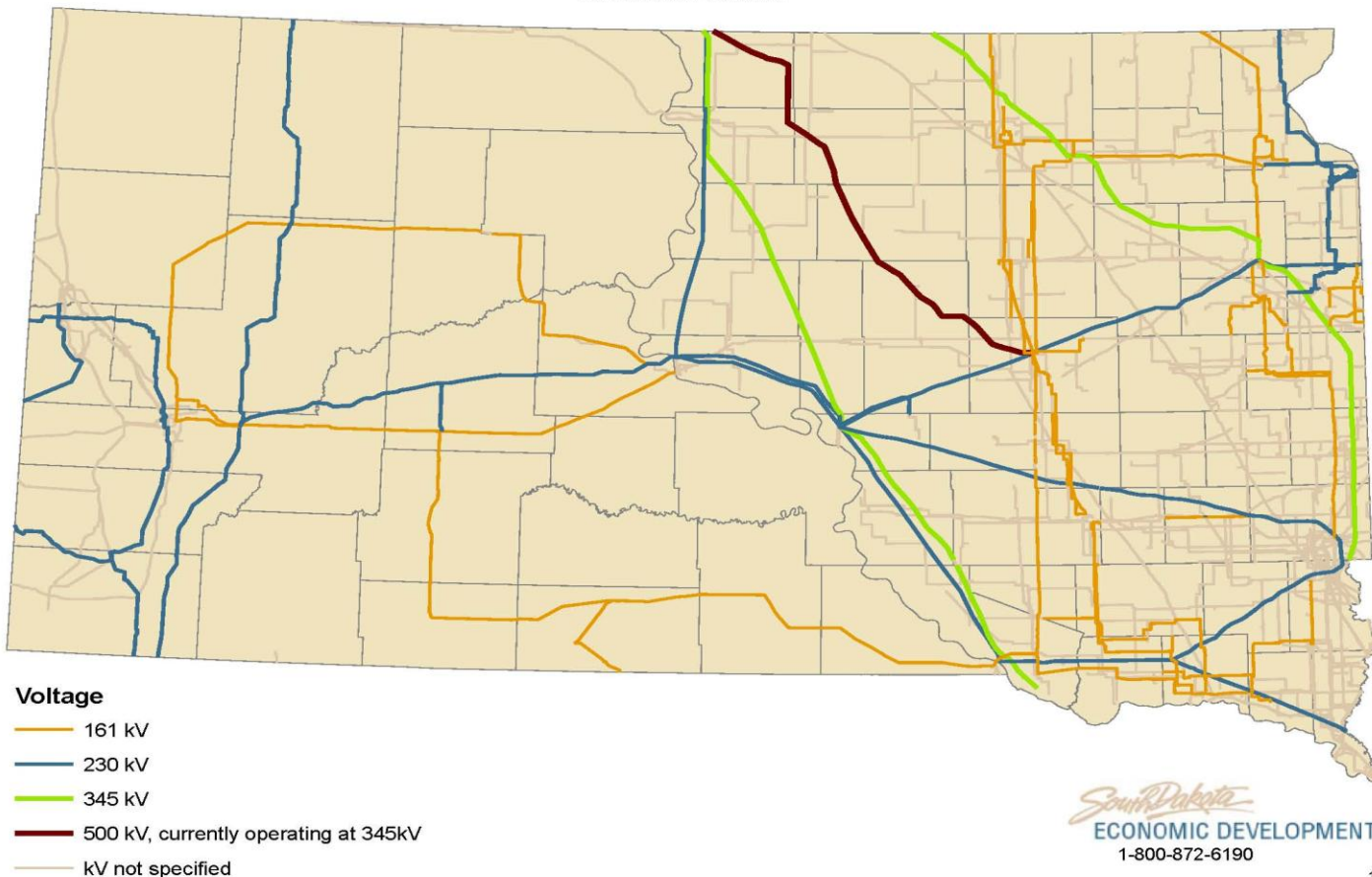
- There is no disagreement that South Dakota has an excellent wind resource.
- The challenges facing major development of this wind resource will not be resolved quickly.
- Most obstacles are outside the scope of South Dakota's authority.

South Dakota Wind Power Report

- South Dakota does not have the population density to absorb any significant amount of wind generated electricity. Customers in the state are currently well served by economically priced electricity. Any major development of wind must seek markets outside the state.

South Dakota Wind Power Report

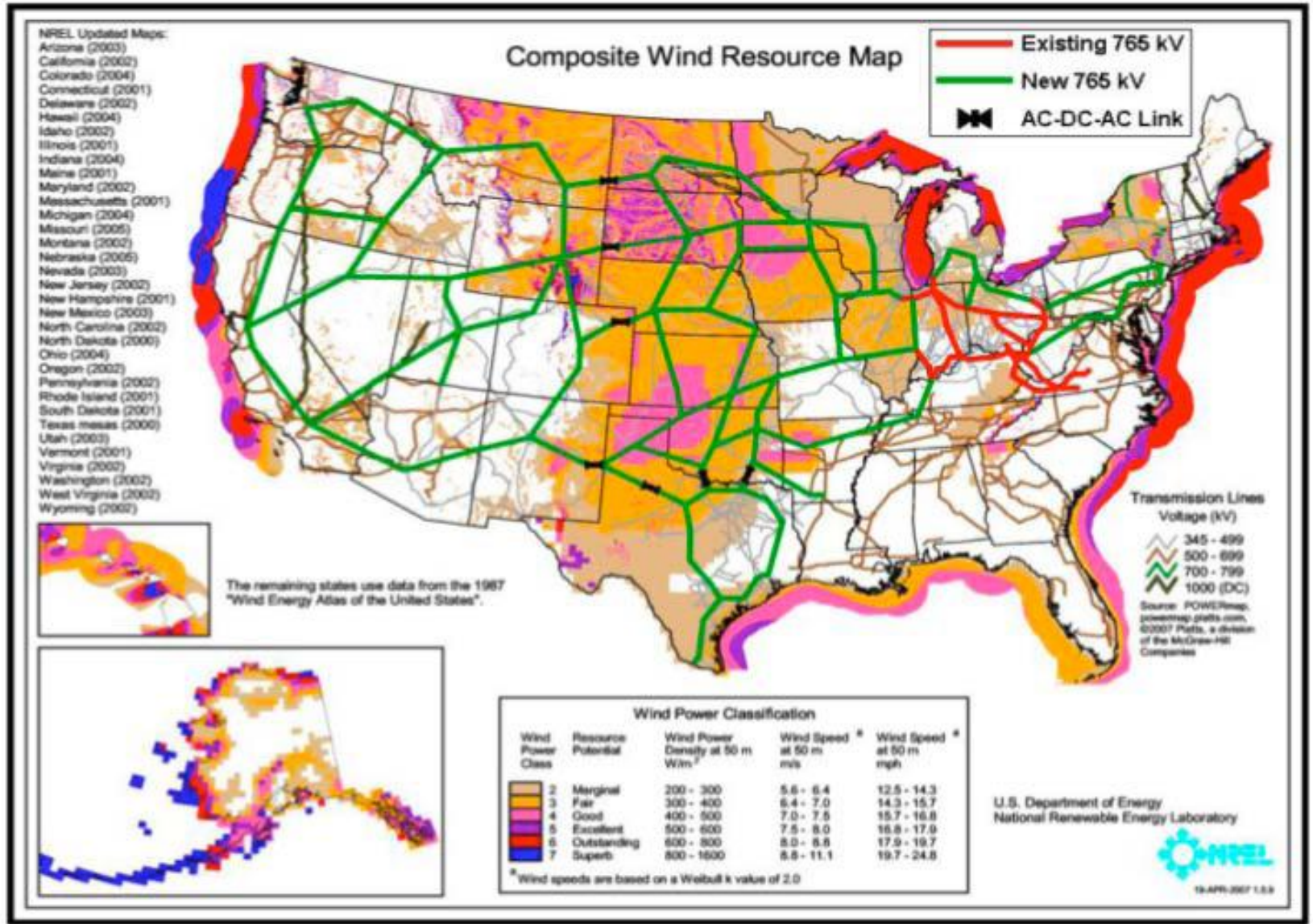
Electric Transmission Lines *in South Dakota*



South Dakota Wind Power Report

- The primary issues facing major development of South Dakota's wind resource are:
 - 1) Transmission
 - 2) Transmission
 - 3) Transmission

US DOE: Interstate Transmission System Model



South Dakota Wind Power Report

- The first transmission issue is known as the “seams issue”. This refers to the fact that anyone attempting to move electricity from the Western Area Power Administration (Western) grid to the Midwest Independent System Operator (MISO) grid must currently pay two transmission fees – one to Western and a second to MISO. This directly affects the economics of trying to move the electricity to markets to the east.

South Dakota Wind Power Report

- The second transmission issue is known as the “queue” problem. This refers to the fact that anyone wanting to move new electricity on the Western or MISO grids must first apply to the respective grid operator for a study to determine the impact on the grid of the proposed electricity movement. For a variety of reasons the current waiting period for study results on the Western grid is several years, while on the MISO grid, it is over 40 years.

South Dakota Wind Power Report

- The third transmission issue relates to the current lack of transmission line capacity, in both the Western and MISO grids, and within South Dakota, to move large blocks of wind electricity to markets outside the state.

South Dakota Wind Power Report

- Economics of wind
 - Wind alone cannot pay for transmission
 - Federal Production Tax Credit (PTC)
 - Lease payments to landowners
 - Local government tax benefits
 - State tax benefits

South Dakota Wind Power Report

- Environmental issues
 - National Environmental Policy Act (NEPA)
 - US Fish and Wildlife Service
 - ✓ Protective easements
 - ✓ Whooping Crane migration
 - South Dakota State Historic Preservation Office

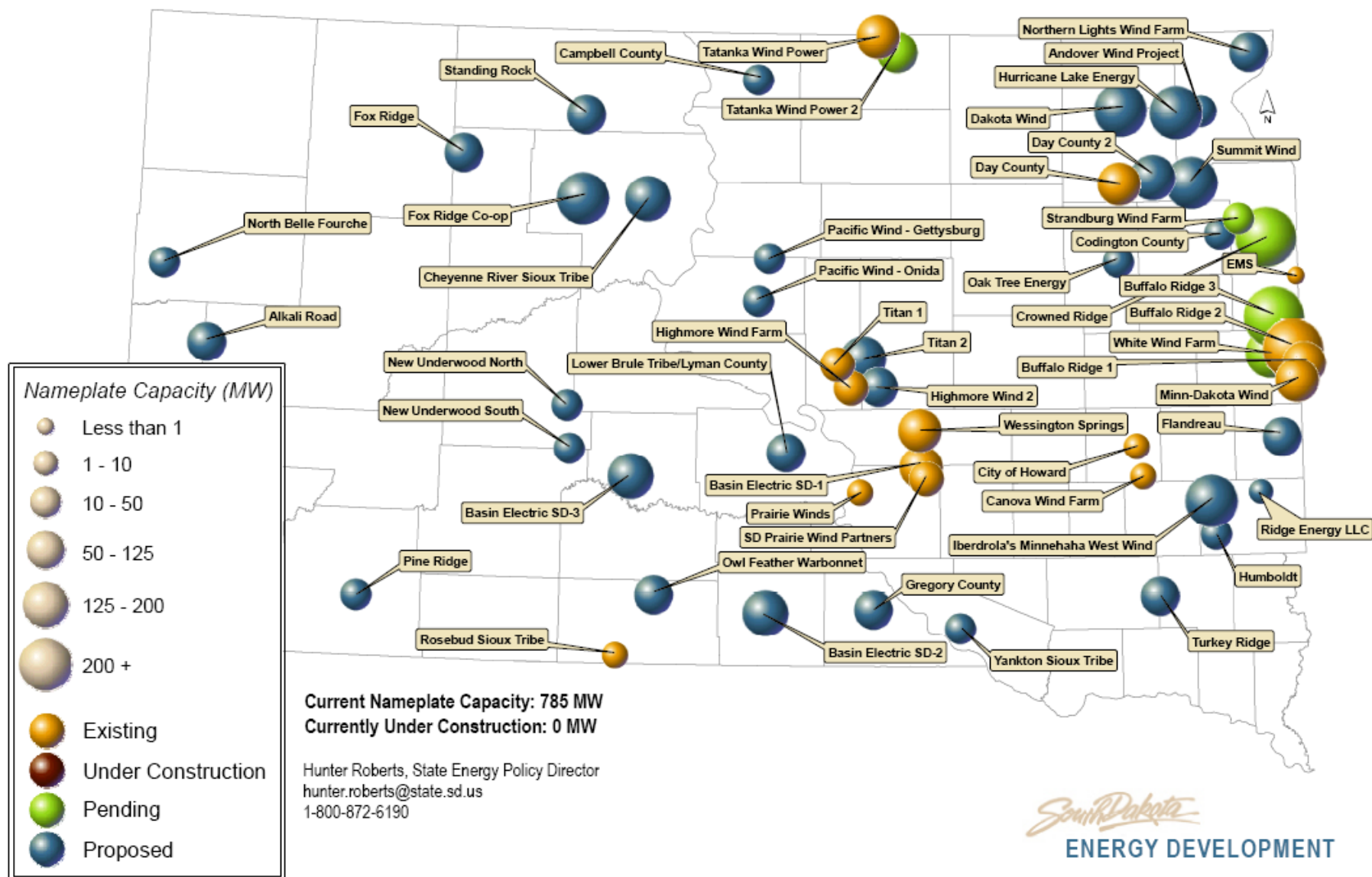
South Dakota Wind Power Report

Summary

- Large scale wind development in South Dakota faces several major transmission related obstacles outside of the state's control
- The primary economic benefits from wind power development flow thru landowner easement payments and property taxes

South Dakota Wind Energy Development

by Capacity and Status



Please note: this map may not represent every proposed wind farm in SD, it only represents the wind farms that the SD Governor's Office of Economic Development has direct knowledge of.

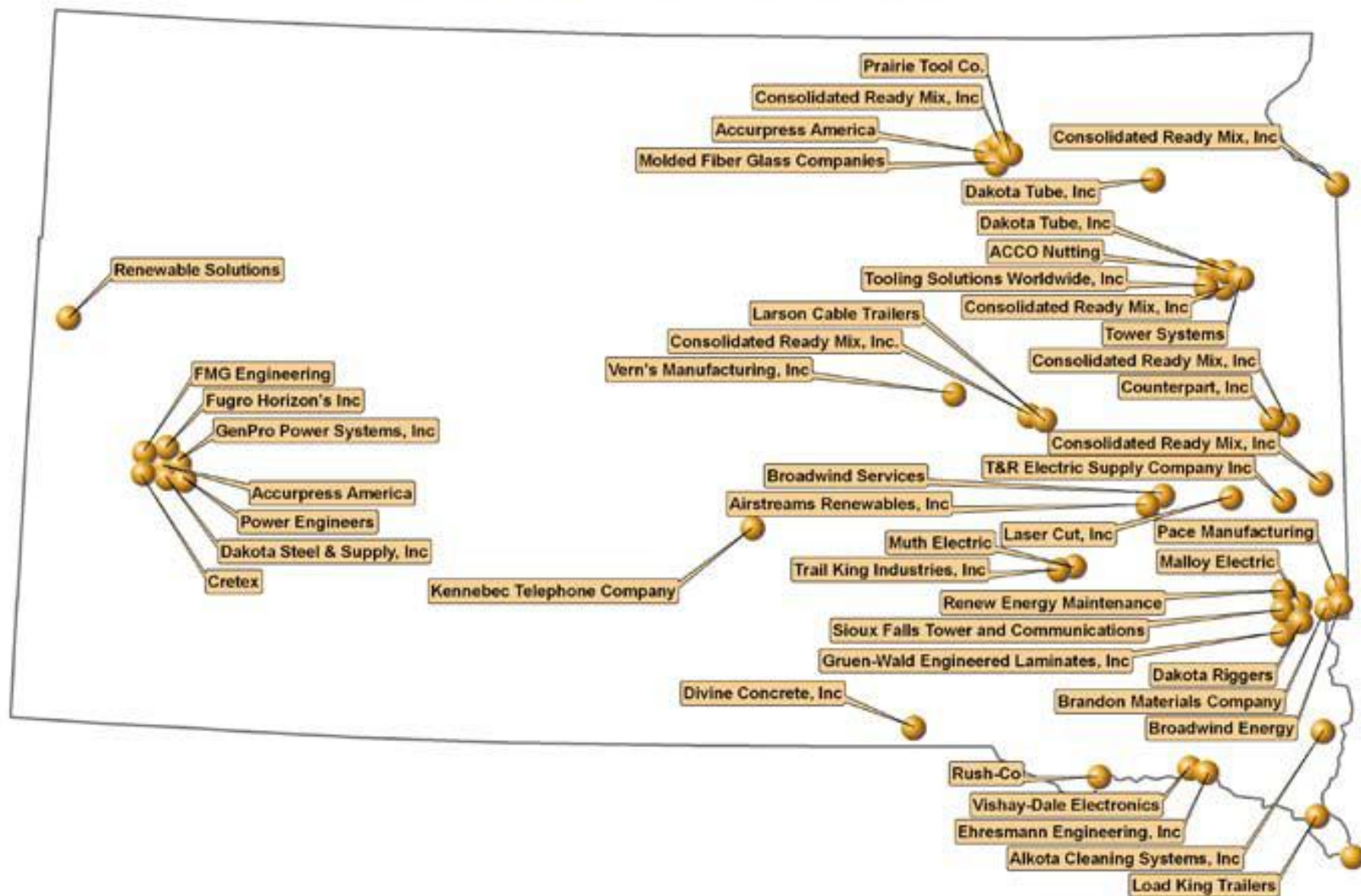
South Dakota Wind Energy Economic Development

- Jobs –
 - Construction: 2.5-3 jobs per MW of nameplate capacity
 - Operations: 1 job for every 10 turbines
- Construction – Cement and excavation contractors, local hotels and restaurants
- Landowners –
 - Lease Arrangements
 - Community Ownership Model

SD Wind Energy Supply Chain

- Manufacturers –
 - Molded Fiber Glass
- Services –
 - Broadwind Energy Services,
 - Malloy Electric
- Ancillary –
 - Muth Electric,
 - Tower Systems,
 - Trail King Industries,
 - FMG Engineering

Wind Energy Related Companies



Thank you

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